

Appl. No.: 10/709,687
Amdt. Dated: 7/4/2006
Reply to Office action of: 04/07/2006

AMENDMENTS TO THE DRAWINGS:

The attached sheet(s) of drawings includes new Figure 2. New Figure 2 illustrates the blocks of Figure 1 in plan view of the invention mounted in a vehicle having a door with a moveable windowpane.

Attachment: Additional Sheet(s) - 1

Appl. No.: 10/709,687
Amdt. Dated: 7/4/2006
Reply to Office action of: 04/07/2006

REMARKS/ARGUMENTS

In the specification, paragraph 13, has been amended to insert a period at the end of the sentence in line 16, and to correct grammatical and typographical errors.

In new Figure 2, has been added showing a plan view of the block diagram of Figure 1 as suggested by the Examiner.

Claims 1 – 12 remain in this application. Claims 1 – 12 have been amended to correct grammatical and typographical errors and provide proper claim formatting.

No new matter has been introduced by these amendments.

In response to the Examiner's inquiry Applicants confirm that this application is a continuity application of PCT/ES02/00613 filed 12/22/2002 and no foreign priority is claimed.

The drawings were objected to by the Examiner because only a block diagram of components and their operation was provided. The applicants have now provided an additional drawing showing a plan view of an automobile with the components of the claimed invention depicted in more illustrative manner. These objections are now overcome by the corrected new drawing sheets comprising Figures 1 and 2. In light of these new drawings Applicants respectfully request these objections to be removed.

The specification has been objected to by the Examiner for there being a period missing at the end of the sentence located in paragraph 13 on line 16. The Applicants thank the Examiner for pointing this typographical error out to them. The error has been corrected by this amendment. In light of the amendment to paragraph 13, line 16 this objection is now moot and applicants respectfully request its removal.

The claims have been objected to by the Examiner for improper language and claim format. By this amendment these improper uses of language and improper claim formatting has been corrected. Applicants would also point out that claims that have literal support in the specification have been consistently found the courts to be properly supported. In light of these amendments these objections are now moot and applicants respectfully request the objections be removed.

Claims 1 – 2, and 10 – 11 were rejected under 35 U.S.C. 102(b) as being anticipated by Chang (US 5,857,071). Specifically, the Examiner states:

With respect to claim 1, Chang discloses an
advanced automobile window-opening operation device

Appl. No.: 10/709,687

Amdt. Dated: 7/4/2006

Reply to Office action of: 04/07/2006

(figure 1; column 2, lines 41 – 45) consisting of:

an electromechanical set (figure 6a; column 2, lines 45 – 53) that includes an activation switch (item 30) and electronic switching circuitry (figure 6a, items 26, 28; column 3, lines 5 – 10) that can operate on an electrical motor (figure 2, item 66) mechanically associated to the vehicle's window-opening mechanism (figure 2, item 60).

characterized because the mentioned switch operates the window opening mechanism by means of the aforementioned electronic switching circuitry (figure 2, items 26, 28), which includes a switching board (figure 6a, items 30, 32, 34; column 2, lines 53 – 57);

provided with communication through a multi-signal channel or bus to the electronic system of the vehicle,

and connected through another multi-signal channel or bus (figure 2, connections between switching circuitry 26, 28 and driver 60) to the activation and control board of the electric motor of the window-opening device,

being these circuits connected to the vehicle's chassis (figure 3a, 3b, 4, 7a, and 7b, circuits share a common ground).

The communication of the electromechanical set through a multi-signal channel or bus to the electronic system of the vehicle is inherent in Chang, since it is necessarily provided to connect the switching circuitry to the rest of the vehicle. The power window switch in Chang does not have its own power source (figure 2), and therefore, must be connected to the electronic system of the vehicle. Further, it is inherent that the grounded circuit components in Chang are connected to the vehicle's ground, which is connected to the vehicle's chassis. Otherwise, the circuits ground would not be a ground, but simply another conductive wire.

With respect to claim 2, Chang discloses a device according to claim 1, and further discloses the switch is multi-position (figure 6a; column 2, lines 53 – 57) and has two operating modes (figures 7a, 7b; column 5 line 44 to

Appl. No.: 10/709,687
Amdt. Dated: 7/4/2006
Reply to Office action of: 04/07/2006

column 6, line 55), one manual for low displacement speeds and another one automatic for high speed of displacement of the window opening device.

The power window switch disclosed in Chang is multi-position (forward and reverse) and contains four operating modes (00, 01, 10, 11; column 6, lines 54 – 55), where each mode results in a different displacement speed.

With respect to claim 10, Chang discloses the device according to claim 1, and further discloses the switch is shaped like a lever switch (figure 6a, item 30).

With respect to claim 11, Chang discloses the device according to claim 2, and further discloses the switch is shaped like a lever switch (figure 6a, item 30).

Applicant respectfully traverses this rejection. The key to Applicants' invention is a device that provides for raising or lowering an automobile window panel at two different speeds. A faster speed for fully opening or closing the window such as when the operator wishes to prevent entry of rain into the automobile passenger compartment and a slower speed when the operator wishes to raise or lower the window only a small amount to adjust ventilation for example. Doing this second operation is much easier for the operator to do at a lower speed of movement to allow more precision. This is accomplished by the use of a joystick control which provides both rotational and straight-line operation of the joystick switching function.

A fair reading of the Chang (US 5,857,071) reference discloses a device for opening and closing an automobile window panel at different speeds based upon the amount of pressure the operator applies to a pressure sensitive switch (see for example, Col. 1, lines 34 – 38). This is accomplished by utilizing a pressure sensor switch and associated electronics that either measures changes in impedance (see for example, Col. 2, lines 4 – 7), or measures changes in resistance (see for example, Col. 1, line 64 through Col. 2, line 3). In operation, this Chang reference device utilizes a pressure sensitive actuator or button (see for example Col. 2, lines 45 – 53) which imparts a force on a pressure-responsive variable impedance device (see for example Col. 2, lines 53 – 56) or on a pressure-responsive variable resistance device (see for example Col. 2, lines 57 – 62). This device must therefore also have voltage divider and comparator devices in the system to allow the device to function (see for example, Col. 3, lines 5 – 23). There is nothing in this reference with discloses, teaches, or fairly suggests that the pressure sensitive control switch and pressure sensing electronics may be replaced with an non-

Appl. No.: 10/709,687
Amdt. Dated: 7/4/2006
Reply to Office action of: 04/07/2006

pressure sensitive input switch system. In addition, this reference has as critical components impedance or resistance sensing devices, a voltage comparator and a voltage divider none of which are required by Applicants claimed invention. In fact, the only common element in this reference and Applicants' claimed invention is that an automobile window panel is moved at one of two speeds by operator choice. Clearly, when viewed in this light this rejection is now moot and Applicant respectfully requests this rejection be removed.

Claims 3 and 12 were rejected under 35 U.S.C. 103(a) as being obvious in view of Chang (US 5,857,071). Specifically, the Examiner states:

With respect to claim 3, Chang discloses a device according to claim 1, but does not expressly disclose the described device permits the operation of the panels of one door from the opposite door by means of the mentioned communication means, through multi-signal channel or bus, with the vehicle's electronic system.

At the time of the invention by applicants, it would have been obvious to a person of ordinary skill in the art to combine the power window switch disclosed in Chang with a control panel that permits the operation of a window (passenger side) from the opposite door (passenger side). Such a configuration is standard on modern cars with power windows.

The motivation for doing so would have been to provide the driver of the car with convenient access to control all the windows in the vehicle.

With respect to claim 12, Chang discloses a device according to claim 3, and further discloses the switch is shaped like a lever switch (figure 6a) or joy stick to rotate in manual mode and to move forward and backward when in automatic mode, as discussed above in the rejection of claims 10 and 11, as discussed above.

Applicant respectfully traverses this rejection. The key to Applicants' invention, as mentioned above, is a device that provides for raising or lowering an automobile window panel at two different speeds. A faster speed for fully opening or closing the window such as when the operator wishes to prevent entry of rain into the automobile passenger compartment and a slower speed when the operator wishes to raise or lower the window only a small amount to adjust ventilation for example. Doing this second

Appl. No.: 10/709,687
Amdt. Dated: 7/4/2006
Reply to Office action of: 04/07/2006

operation is much easier for the operator to do at a lower speed of movement to allow more precision. This is accomplished by the use of a joystick control which provides both rotational and straight-line operation of the joystick switching function.

A fair reading of the Chang (US 5,857,071) reference, as mentioned above, discloses a device for opening and closing an automobile window panel at different speeds based upon the amount of pressure the operator applies to a pressure sensitive switch (see for example, Col. 1, lines 34 – 38). This is accomplished by utilizing a pressure sensor switch and associated electronics that either measures changes in impedance (see for example, Col. 2, lines 4 – 7), or measures changes in resistance (see for example, Col. 1, line 64 through Col. 2, line 3). In operation, this Chang reference device utilizes a pressure sensitive actuator or button (see for example Col. 2, lines 45 – 53) which imparts a force on a pressure-responsive variable impedance device (see for example Col. 2, lines 53 – 56) or on a pressure-responsive variable resistance device (see for example Col. 2, lines 57 – 62). This device must therefore also have voltage divider and comparator devices in the system to allow the device to function (see for example, Col. 3, lines 5 – 23). There is nothing in this reference with discloses, teaches, or fairly suggests that the pressure sensitive control switch and pressure sensing electronics may be replaced with an non-pressure sensitive input switch system. In addition, this reference has as critical components impedance or resistance sensing devices, a voltage comparator and a voltage divider none of which are required by Applicants claimed invention. In fact, the only common element in this reference and Applicants' claimed invention is that an automobile window panel is moved at one of two speeds by operator choice. Clearly, when viewed in this light this rejection is now moot and Applicant respectfully requests this rejection be removed.

Claims 4 – 9 were rejected under 35 U.S.C. 103(a) as being unpatentable over Chang, in view of Boisvert (US 6,064,165). Specifically, the Examiner states:

With respect to claim 4, Chang discloses a device according to claim 1, but does not expressly disclose a stop anti-catch feature controlled by means fo the window opening device's electric motor operation and control board.

It would have been obvious to a person of ordinary skill in the art to include a control board. Such a component is necessary in order to provide a support for mounting and

Appl. No.: 10/709,687
Amdt. Dated: 7/4/2006
Reply to Office action of: 04/07/2006

connecting the components of the circuitry of the window control device.

Boisvert discloses power window control device that can detect an obstruction when the window is closing (figures 1a, 1b, items 10, 12; column 8, lines 22 – 34).

Chang and Boisvert are analogous because they are from the same field of endeavor, namely controllers for operating power windows.

At the time of the invention by applicant, it would have been obvious to a person of ordinary skill to combine the power window switch disclosed in Chang with the stop anti-catch device disclosed in Boisvert. The stop anti-catch device disclosed in Boisvert is applicable to sunroofs, as well as power windows (column 4, lines 27 – 39).

The motivation for doing so would have been to stop the power window motor in the event of an obstruction blocking the path of the window.

With respect to claim 5, Chang discloses a device according to claim 2, and Boisvert discloses a stop anti-catch feature controlled by means of the window opening device's electric motor operation and control board, as discussed above.

With respect to claim 6, Chang discloses the device according to claim 3, and Boisvert discloses a stop anti-catch feature controlled by means of the window opening device's electric motor operation and control board, as discussed above.

With respect to claim 7, Chang discloses the device according to claim 1, and Boisvert discloses a window-opening operating device that operates on sunroofs (figure 6, items 200 – 208; column 2, lines 29 – 37; column 22, lines 33 – 67) in addition to the vehicle's door windows.

At the time of the invention by applicants it would have been obvious to combine the power window switch disclosed in Chang with the power sunroof operator disclosed in Boisvert.

The motivation for doing so would have been to apply the same control system to multiple windows. The sunroof is simply a power window that operates in a horizontal direction.

With respect to claim 8, Chang discloses a device according to claim 2, and Boisvert discloses the device

Appl. No.: 10/709,687
Amdt. Dated: 7/4/2006
Reply to Office action of: 04/07/2006

operates on sunroofs, in addition to the vehicle's door window, as discussed above.

With respect to claim 9 Chang discloses a device according to claim 3, and Boisvert discloses the device operates on sunroofs, in addition to the vehicle's door window, as discussed above.

Applicant respectfully traverses this rejection. The key to Applicants' invention, as mentioned above, is a device that provides for raising or lowering an automobile window panel at two different speeds. A faster speed for fully opening or closing the window such as when the operator wishes to prevent entry of rain into the automobile passenger compartment and a slower speed when the operator wishes to raise or lower the window only a small amount to adjust ventilation for example. Doing this second operation is much easier for the operator to do at a lower speed of movement to allow more precision. This is accomplished by the use of a joystick control which provides both rotational and straight-line operation of the joystick switching function.

A fair reading of the Chang (US 5,857,071) reference, as mentioned above, discloses a device for opening and closing an automobile window panel at different speeds based upon the amount of pressure the operator applies to a pressure sensitive switch (see for example, Col. 1, lines 34 – 38). This is accomplished by utilizing a pressure sensor switch and associated electronics that either measures changes in impedance (see for example, Col. 2, lines 4 – 7), or measures changes in resistance (see for example, Col. 1, line 64 through Col. 2, line 3). In operation, this Chang reference device utilizes a pressure sensitive actuator or button (see for example Col. 2, lines 45 – 53) which imparts a force on a pressure-responsive variable impedance device (see for example Col. 2, lines 53 – 56) or on a pressure-responsive variable resistance device (see for example Col. 2, lines 57 – 62). This device must therefore also have voltage divider and comparator devices in the system to allow the device to function (see for example, Col. 3, lines 5 – 23). There is nothing in this reference which discloses, teaches, or fairly suggests that the pressure sensitive control switch and pressure sensing electronics may be replaced with a non-pressure sensitive input switch system. In addition, this reference has as critical components impedance or resistance sensing devices, a voltage comparator and a voltage divider none of which are required by Applicants' claimed invention. In fact, the only common element in this reference and Applicants' claimed invention is that an automobile window panel is moved at one of two speeds by operator choice.

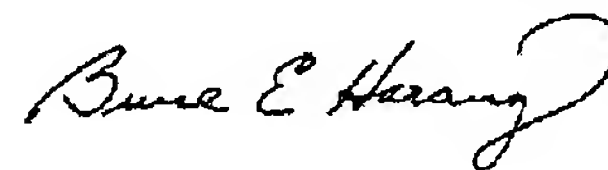
Appl. No.: 10/709,687
Amdt. Dated: 7/4/2006
Reply to Office action of: 04/07/2006

A fair reading of the Boisvert (US 6,064,165) reference discloses a power window controller that can determine the presence of an obstruction and determine if the obstruction is hard or soft. This reference also teaches that the device may be used on sunroofs, doors, power seats, and other moving systems. The device accomplishes this obstruction determination by monitoring the current levels of the electric motor used to move the window panel. In operation the device senses the motor current and stops the motor if the sensed current value exceeds a predetermined level (see for example, Col. 2, lines 37 – 46). In addition, the device can determine if the obstruction is a hard obstruction such as a body part or a soft obstruction such as the difference in resistance of a window-sealing gasket (see for example, Col. 2, line 56 through Col. 3, line 2). This reference does not disclose, teach, or fairly suggest how to provide a window panel opening and closing device that allows the window panel operator to rise or lower the window slowly or quickly as the operator chooses. In fact, other than the teaching that this device can be used with sunroofs as well as windows it bears no relevance to Applicant's claimed invention whatsoever. Furthermore, this reference does not disclose, teach, or fairly suggest how to operate any moveable panel at two speeds, nor does it provide the necessary impetus to suggest to one skilled in the art how to combine its teaching with the teaching of the Chang reference to reach Applicant's claimed invention. And even if these references could be combined, which they cannot, they do not disclose, teach, or fairly suggest to one skilled in the art how to provide for a two-speed window panel opening and closing device operated by a joystick input switch. Clearly, when viewed in this light this rejection is now moot and Applicant respectfully requests this rejection be removed.

Appl. No.: 10/709,687
Amdt. Dated: 7/4/2006
Reply to Office action of: 04/07/2006

In view of the remarks herein, and the amendments hereto, it is submitted that this application is in condition for allowance, and such action and issuance of a timely Notice of Allowance is respectfully solicited.

Respectfully submitted,



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Attachments